

Baseline and Additionality Assessment

The baseline and additionality assessment is a requirement for eligibility under the Puro Standard. The assessment is made by the CO₂ Removal Supplier and verified by the independent 3rd party auditor. The assessment made in this document will be publicly available in the Puro Registry.

The Puro Standard only certifies durable carbon removals from the atmosphere that are net-negative and does not certify emissions reductions or avoidance. The CORCs (Carbon dioxide removal certificates), issued therefore represent a net carbon removal (1 tCO₂eq. net) from the atmosphere to a durable storage of minimum 100 years, from which are subtracted any supply-chain emissions from the project, any re-emissions over the guaranteed storage time, and any baseline removals taking place in a baseline scenarios.

The CO₂ Removal Supplier must in this assessment:

- **Define** and quantify all reasonable **baseline alternatives** to the proposed project activity to remove carbon with carbon financing. A baseline is a scenario that reasonably represents the natural and anthropogenic carbon removals to a permanent storage (storage durability over 100 years) in the absence of the carbon removal activity proposed by the CO₂ Removal Supplier. Although anthropogenic emissions may take place in the baseline scenarios, these emissions do not constitute a reference point for the quantification of CORCs (only the baseline removals do).
- Demonstrate **carbon additionality to the baseline**, meaning that the project must convincingly demonstrate that it is resulting to higher volumes of carbon removals than the likely baseline alternatives (question A1.).
- Demonstrate **regulatory additionality**, meaning that the project is not required by existing laws, regulations, or other binding obligations (question A2.).
- Demonstrate **financial additionality**, meaning that the CO₂ removals achieved are a result of carbon finance and that the project activity would not be economically viable without the carbon finance. The project activity can have substantial other non-carbon income sources, if the carbon finance through CORCs is significant for the economic viability of the project. To demonstrate financial additionality, CO₂ removal Supplier must provide the responses in this form and must be able to provide full project financials for verification.

Reference documents: [Puro Standard general Rules v3.0](#), rule 2.1.3 and [Additionality Assessment requirements](#)

Activity name	Activity description	Removals to storage (100+ yr) due to project activity (human activity)	Natural removals to storage (100+ yr)
Baseline:	<i>Incineration of the composting screening residues</i>	None	None
Alternative scenario 1: <i>Compost production</i>	<i>Shredding of screening residues and bring it back to the composting process. Problem: plastic pollutants become more and more enriched</i>	None – because compost is not stable	None
Alternative scenario 2:			
Alternative scenario 3:			
Project activity: <i>Pyrodry</i>	<i>Biochar production</i>	1-2.000 tons CO ₂ per year	

A1. Does the project lead to higher volumes of carbon removal than the baseline?	Yes / No
Biochar is stable	yes

A2. Is the project required by existing laws, regulations, or other binding obligations ?	Yes / No
On the contrary: its not so easy to get a permit for such facilities	no

A3. Is the project first-of-its-kind?	Yes / No
We closed a lot of cycles in the composting process	yes

A4. Is the project dependent on carbon finance?	Yes / No
It would be impossible to build such facilities without carbon finance	yes

A5. Does the project need a large investment to achieve carbon removal ?	Yes / No
We have invested around 8 mill. €	yes

A6. If investment is needed, is/was carbon finance considered when the investment decision is/was made?	Yes / No
We would not have done it without carbon finance	yes

Some projects may demonstrate additionality through simple cost analysis: this is applicable for projects where ex-ante investment analysis is not applicable, because a large investment is not needed. Example of such project could be charcoal producers starting to produce biochar for soil applications using existing equipment with minor adaptations.

If large investment is needed, CO2 Removal Suppliers can be guided by the CDM Methodological Tool 27 of the UNFCCC Clean Development Mechanism "[Investment Analysis](#)" to demonstrate financial additionality.

Investition		Afa Jahre	€/Jahr
Investition Hallen und Bauwerke	4.007.580	40	100.190
Invest Maschinen	3.329.714	10	332.971
Verzinsung in Prozent		6	440.238
Summe Investition bzw. Afa/Jahr	7.337.294		873.399
Betriebskosten		€/Einheit	
Rohstoff in to	2.000	40	80.000
Schwefelsäure in Tonnen	40	310	12.400
Reparatur in Prozent Masch.-Invest	2		66.594
Strom für Betriebsstunden (abzügl.PV)	8.000	16,80	99.400
Personalkosten pro Linie	120.000		120.000
Summe Betriebskosten			378.394
Erlöse Aus Pyrolyse		€/Einheit	
Klärschlamm-Trocknung Wasser-Verd.	3.995	99	395.472
Pflanzkohle to mit 30% H2O	771	700	540.000
Zertifikatgelder für CO2-tonnen (Cx2,5)	1.350	250	337.500
Erlöse pro Jahr			1.272.972
Gewinn pro Jahr			21.179
Produktionskosten pro Tonne Pflanzkohle mit Zertifikate			673
Produktionskosten pro Tonne Pflanzkohle ohne Zertifikate			1.110
ROI in Jahre ohne Verzinsung			8,2

This calculation of our facility shows the importance of carbon finance. Without it, the production costs per ton of biochar would be 1.110€. It would be impossible to sell big amounts of biochar for this price.

I hereby declare that all information provided is truthful and precise to the best of my knowledge.

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